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(54) Title: ENCAPSULATION OF HAZARDOUS WASTE MATERIALS

(57) **Abstract:** The invention provides a method for the encapsulation of uranium metal which comprises treating the metal with an encapsulant which comprises a cementitious material and curing the cementitious material, the process additionally comprising the provision of means for the minimisation of the corrosion of the metal. Suitable modes for the provision of means for the minimisation of corrosion include the provision of a source of oxygen within the cement matrix, either by facilitating enhanced oxygen access from the atmosphere using air entraining agents or cenospheres or by the inclusion of an independent source of oxygen, for example a peroxide. An alternative mode for the provision of means for the minimisation of corrosion comprises facilitating the minimisation of the water content of the matrix, which is conveniently achieved by the addition of superplasticisers. The method allows for the long term storage of uranium metal and provides significant benefits in terms of health, safety and the environment.



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